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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,237	05/31/2000	David A. Hillard	CER1019-00	3785
26541	7590	03/15/2006	EXAMINER	
Cindy S. Kaplan P.O. BOX 2448 SARATOGA, CA 95070			HOM, SHICK C	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/584,237	<b>Applicant(s)</b> HILLARD ET AL.	
	<b>Examiner</b> Shick C. Horn	<b>Art Unit</b> 2666	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 5-11, 13-16, 20-25, 27, 30, 32-35, 37-40, 42-47, 49 and 50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-10, 21-24, 30, 32-35, 37-39 and 44-46 is/are allowed.
- 6) ☒ Claim(s) 1, 5-6, 11, 13-16, 20, 25, 27-29, 40, 42-43, 47, 49-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed 12/21/05 have been fully considered but they are not persuasive.

In pages 11-12 of the response, applicant argued that Heuer in view of Hluchyj et al. do not teach or suggest the first and second network elements that support VT cross connections and wherein a VT circuit traverses one or more NE intermediate to the first and second NE, wherein at least one of the intermediate NE having one of available VT cross connections that are not utilized or no VT cross connection capability is not persuasive because Heuer in col. 1 lines 51-63, col. 2 line 66 to col. 3 line 19, and col. 4 lines 20-39 which recite the synchronous transport module or synchronous transport signals for transmission of data packets wherein the data packets are packed in subunits of virtual tributaries VT and data packet being transmitted between network elements through intermediate network elements, respectively, clearly anticipate the Synchronous Transport Signal STS circuit connecting the first and second network elements that support VT cross connections including an intermediate NE. Heuer did not specifically recite

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the intermediate NE having VT cross connections that are not utilized or no VT cross connection capability. Hluchyj et al. In col. 6 lines 18-38 recite tunneling using interface such as synchronous optical network having different backbone than that from which the packet-based signal originally arrived to the server node clearly anticipate using intermediate NE having no VT cross connection capability, i.e. different backbone than that from which the packet-based signal originally arrived; further, Heuer's STS circuit do not appear have VT cross connection capability.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered

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therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 11, 13-16, 25, 27-29, 40, 47, and 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heuer (6,236,660) in view of Hluchyj et al. (6,282,193).

Regarding claims 1, 11, 13-16, 25, 27-29, 40, 47, and 49-50:

Heuer discloses the method for routing Virtual Tributary (VT) circuits over a SONET/SDH network, wherein the method can be performed by a single Network Element (NE) (see col. 2 line 66 to col. 3 line 19 which recite the use of SONET virtual tributary for transmitting data packets in synchronous transport modules), comprising: creating a VT ingress interface VT-STS cross connection at a first NE; creating a VT egress interface STS-VT cross connection at a second NE; creating a Synchronous Transport Signal STS circuit connection between said first and said second NE, said STS circuit traversing at least one intermediate NE; and routing a VT circuit between said two NEs

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over said STS circuit connection (see col. 4 lines 20-39 which recite sending data packet from the first network element to the nth network element through the intermediate network element which is between the first network element and the nth network element using a virtual container of a synchronous transport module clearly reads on the STS circuit connections between the NEs and routing the VT circuit between the two NEs over the STS connection as claimed; In page 13, line 10 to page 14 line 7 of the arguments of 5/26/05, applicant argued that Heuer does not disclose creating VT ingress and VT egress interface VT-STs cross connections as in claims 11 and 25 is not persuasive because Heuer in col. 2 line 66 to col. 3 line 19 and col. 10 lines 24-27 and 56-59 which recite the used of SONET virtual tributaries VT including the SONET interfaces for transmitting said VT clearly reads on creating VT ingress and VT egress interface VT-STs cross connections, since in order to use the VT ingress and egress interfaces they must have been first created); and routing said VT circuit between said second and said first NE such that the VT circuit enters said egress cross connection, exits said ingress cross connection, and is carried within said STS circuit (see cross connection in Figs. 6 and 7).

Heuer disclose all the subject matter of the claimed invention with the exception of wherein the VT circuit traverses

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one or more intermediate to said first NE and said second NE whereby at least one of said intermediate NE having one of available VT cross connections that are not utilized or no VT cross connection capability as recited in claims 1, 11, 13, 16, 25, 27, 40, 47; and wherein said STS circuit is dedicated for and used to route only VT circuits and is represented as a single link between the first NE and the second NE in a VT network topology as in claims 15, 29, 50.

Hluchyj et al. from the same or similar fields of endeavor teach that it is known to provide wherein the VT circuit traverses one or more intermediate to said first NE and said second NE, at least one of said intermediate NE having one of available VT cross connections that are not utilized or no VT cross connection capability and wherein said STS circuit is dedicated for and used to route only VT circuits and is represented as a single link between the first NE and the second NE in a VT network topology (see col. 6 lines 18-38 which recite the use of packet interfaces including synchronous optical network Sonet and which support tunneling using point-to-point tunneling protocol PPTP or L2TP clearly reads on the VT circuit traversing the NEs not using NE having VT cross connections or using NE with no VT cross connection capability and the STS circuit being dedicated and a single link). Thus, it would have

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been obvious to the person having ordinary skill in the art at the time the invention was made to provide wherein the VT circuit traverses one or more intermediate to said first NE and said second NE, at least one of said intermediate NE having one of available VT cross connections that are not utilized or no VT cross connection capability and wherein said STS circuit is dedicated for and used to route only VT circuits and is represented as a single link between the first NE and the second NE in a VT network topology as taught by Hluchyj et al. in the communications apparatus and method of Heuer. The VT circuit traversing one or more intermediate to said first NE and said second NE, at least one of said intermediate NE having one of available VT cross connections that are not utilized or no VT cross connection capability and wherein said STS circuit is dedicated for and used to route only VT circuits and is represented as a single link between the first NE and the second NE in a VT network topology can be implemented by providing the point-to-point tunneling connection of Hluchyj et al. in the method and apparatus for routing VT circuits Heuer. The motivation for using the point-to-point tunneling connection as taught by Hluchyj et al. in the communication method and apparatus of Heuer being that it provides the desirable added



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feature of a point-to-point secure connection between the network elements.

5. Claims 5, 6, 20, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heuer (6,236,660) and Hluchyj et al. (6,282,193) in view of Takemura et al. (6,671,271).

Regarding claims 5, 6, 20, 42, 43:

For claims 5, 6, 20, 42, 43, Heuer and Hluchyj et al. disclose the method and apparatus described in paragraph 6 of this office action. Heuer and Hluchyj et al. disclose all the subject matter of the claimed invention with the exception of wherein said VT circuit is VT 1.5 circuit or a larger VT circuit and said STS circuit is an STS-1 circuit or larger STS circuit, and wherein if said STS circuit is said STS-1 circuit, said STS-1 circuit is able to route up to 28 VT1.5 circuits as in claims 5, 20, 42 and wherein said method is performed manually by a user or is performed automatically by routing and provisioning software as in claims 6, 43.

Takemura et al. from the same or similar fields of endeavor teach that it is known to provide wherein said VT circuit being VT 1.5 circuit or a larger VT circuit and said STS circuit being an STS-1 circuit or larger STS circuit, and wherein if said STS

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circuit is said STS-1 circuit, said STS-1 circuit is able to route up to 28 VT1.5 circuits (see col. 2 lines 28-36 which recite the payload of the synchronous payload envelope VTs being VT 1.5 and the STS-1 frames used to transmit a VT and col. 14 lines 15-28 which recite the VT mapped STS-1 signal being 28 VTs as in claim 5) and wherein said method is performed manually by a user or is performed automatically by routing and provisioning software (see col. 20 lines 36-52 which recite the downloaded software to the network element). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide wherein said VT circuit is VT 1.5 circuit or a larger VT circuit and said STS circuit is an STS-1 circuit or larger STS circuit, and wherein if said STS circuit is said STS-1 circuit, said STS-1 circuit is able to route up to 28 VT1.5 circuits and wherein said method is performed manually by a user or is performed automatically by routing and provisioning software as taught by Takemura et al. in the method of Heuer and Hluchyj et al. The VT circuit being VT 1.5 circuit or a larger VT circuit and said STS circuit being an STS-1 circuit or larger STS circuit, and wherein if said STS circuit is said STS-1 circuit, said STS-1 circuit is able to route up to 28 VT1.5 circuits and wherein said method is performed manually by a user or is performed automatically by

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routing and provisioning software can be implemented by downloading the software to the network element and providing the VT circuit being VT 1.5 circuit or a larger VT circuit and said STS circuit being an STS-1 circuit or larger STS circuit, and wherein if said STS circuit is said STS-1 circuit, said STS-1 circuit is able to route up to 28 VT1.5 circuits in the system and method of Heuer and Hluchyj et al. The motivation providing wherein said VT circuit is VT 1.5 circuit or a larger VT circuit and said STS circuit is an STS-1 circuit or larger STS circuit, and wherein if said STS circuit is said STS-1 circuit, said STS-1 circuit is able to route up to 28 VT1.5 circuits and wherein said method is performed manually by a user or is performed automatically by routing and provisioning software as taught by Takemura et al. in the communication system and method of Heuer and Hluchyj et al. being that it provides more efficiency for the system since the system uses standard VT 1.5 and STS-1 circuits and whereby the method for routing the VT circuits can be performed automatically by use of software.

***Allowable Subject Matter***

6. Claims 7-10, 21-24, 30, 32-35, 37-39, and 44-46 are allowed.

**Conclusion**

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH



DANG TON  
PRIMARY EXAMINER